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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BURCH, MELODY M

ART UNIT PAPER NUMBER

3683

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/790,501

Applicant(s)

VERRIET, FRANK

Examiner

Melody M. Burch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/1/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because it appears that the seal in figure 2 should be drawn with perforated lines since it is described as being positioned between the rod and the cylinder head, a position that would not be visible from the perspective shown in figure 2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy

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must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

3. The disclosure is objected to because of the following informalities: equation 2 on pg. 6 is listed as an equation but does not include an equal sign and elements on either side of the equal sign.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 8. The phrase "a second spring" in the last line of the claim is indefinite. It is unclear to the Examiner how a second spring can be claimed before the recitation of a first spring.

Re: claim 10. The phrase "said pressurized air" lacks proper antecedent basis in the claim. Claim 9 is indefinite due to its dependency from claim 8.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 4-6, and 8-13 rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4406473 to Sexton.

Re: claim 1. Sexton shows in figure 4 a preload shock absorber assembly comprising a shock absorber having a hydraulic cylinder 23, and first (shown between elements 23 and 10), second (34) and third (35) springs arranged outside of the hydraulic cylinder, the first spring having a compressible fluid or air providing a first spring rate, the second spring 34 arranged axially from the first spring, and the third spring 35 arranged at least partially coaxially to the first spring.

Re: claim 4. Sexton shows in figure 4 the first spring being provided by walls (the outer wall of element 23 and the inner wall of element 10 forming a pressurized, sealed air chamber, and the third spring arranged in the air chamber.

Re: claims 5 and 13. Sexton shows in figure 4 the limitation wherein an axially movable separator 10,38 provides one of the walls, the separator (particularly portion 38 of the separator) arranged axially between the first and second springs.

Re: claim 6. Sexton shows in figure 4 the limitation wherein the second spring is supported between the separator (the left side portions of which) and a seat 39 secured to the hydraulic cylinder.

Re: claims 8 and 12. Sexton shows in figure 4 a preload shock absorber assembly comprising: a shock absorber having a hydraulic cylinder 23 with a seat 39 secured to an outer wall of the cylinder, a preload air chamber shown between elements 23 and 10 having a pressurized compressible fluid or air with the air chamber arranged radially outwardly of the outer wall of the hydraulic cylinder as shown, and a second spring 34 arranged (radially) between the air chamber (the radially outermost portions of which) and the seat.

Re: claim 9. Sexton shows in figure 4 the limitation wherein a third spring 35 is arranged within the air chamber.

Re: claim 10. Sexton shows in figure 4 the limitation wherein the air chamber includes an axially movable separator 10, and the pressurized air and the third spring exerting a preload on the second spring.

Re: claim 11. Sexton shows in figure 4 a preload shock absorber assembly comprising: a shock absorber having a hydraulic cylinder 23 with an outer wall, an air chamber shown between elements 23 and 10 providing a first spring rate arranged radially outwardly from the outer wall as shown and a mechanical spring 35 arranged within the air chamber providing a second spring rate supplementing the first spring rate.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2, 3, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sexton in view of US Patent 6340153 to Miesner.

Re: claims 2, 3, and 7. Sexton describes the invention substantially as set forth above, including the limitation of a cylinder head or leftmost portions of element 24 at one end of the hydraulic cylinder slideably supporting a rod 28 via the unnumbered element between element 24 and rod 28 with an element shown between the rod and the cylinder head, and a cavity adjacent to the element (the cavity shown immediately to the left of the unnumbered element) and radially inward of the first spring, the cavity at approximately atmospheric pressure in a static condition.

Sexton fails to specifically describe the unnumbered element as a seal.

Miesner teaches in the figure on the front of the patent and in figure 3 the use of a shock absorber having a cylinder head 56 at one end of a cylinder 50 slideably supporting a rod 61 with a seal 74 between the rod and the cylinder head.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the unnumbered element of Sexton to have been a seal, as taught by Miesner, in order to provide a means of preventing fluid leakage.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents: 5263695 to Bianchi, 2909274 to McIntyre, and 6830256 to Bryant teach the use of similar shock absorber assemblies utilizing multiple springs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 15, 2005

Melody M. Burch
2/15/05